

BOGATYREV, V. I.; SOKOLOVA, S.I.

Dissolution of  $U_2C_2O_7$  by means of ion-exchange resins.  
Radichimia 7 no.6:725-727 '65. (MIRA 19:1)

SOKOLOVA, S. L.

Condensers containing mineral oil and chlorinated aromatic compounds. M. G. Gertsenshtain and S. I. Sokolova. Elektricheskaia 60, No. 3, 35-9 (1939). Data are given on the performance of condensers containing mineral oil and Sovol (methyl pentachlorophenyl). With rising temperature the tangent of the angle of deflection decreased in condensers containing Sovol decreased and reached a minimum of about 0.1 at 30-35° and then increased to 0.35 at 90°. For mineral oil the tangent was also at a minimum at 30-35° but slightly higher (0.15) and at 70° it was 0.2. At 45-50° both condensers showed nearly the same tangent. The dielectric properties of Sovol were reduced by the presence of rubber. After 8 months' use the Sovol condensers showed no change in the curves of tangent of angle of deflection vs. voltage whereas for mineral oils the curves were U-shaped with the min. corresponding to the operating voltage. B. Z. Kamach

110-58-6-9/22

AUTHORS: Shakhnovich, M.I., Sokolova, S.L., Bessonova, Ye.I.,  
Engineers and Lipshteyn, R.A., Candidate of Technical Sciences

TITLE: The Influence of Solid Insulating Materials on Transformer  
Oil in the Absence of Oxygen (Vliyaniye tverdykh izolyatsion-  
nykh materialov na transformatornoye maslo pri otsutstvii  
kisloroda)

PERIODICAL: Vestnik Elektro promyshlennosti, 1958, № 6,  
pp 41 - 42 (USSR).

ABSTRACT: Hermetic sealing of transformers is a valuable means of  
protecting the oil from oxidation provided that the sealing is  
perfect. If there are slight leaks, volatile acids may accumu-  
late in the transformer with inconvenient results. After these  
prefatory remarks, the article considers the influence that  
solid insulating materials have on oil in the absence of oxygen.  
Straight mineral transformer oil to standard GOST-982-53 was  
used for the tests, the oil and transformer constructional  
materials being contained in sealed glass vessels. In all tests,  
there was 1.5 cm<sup>2</sup> of material per 1 g oil, after the oil and  
insulating materials had first been dried and de-gassed. The  
tests were run at 95 °C for 1 000 hours: then determinations  
were made of the neutralisation and saponification values, the  
ester number, the water-soluble acids content, the dielectric-loss

Card 1/4

110-58-6-9/22

The Influence of Solid Insulating Materials on Transformer Oil in  
the Absence of Oxygen

angle and the refractive index. Tests were undertaken on insulating varnishes and showed that glyptal-based varnishes could give rise to organic acids up to 0.2 mg KOH/g and water-soluble acids up to 0.1 mg KOH/g. As this effect is not observed when tests are made with exposure to air, it is supposed that some of the acids derived from glyptal-based varnishes are volatile. This is very important because low-molecular-weight acids can be dangerous. Bakelite resins have little influence on the oil beyond increasing the power factor somewhat but, in this respect, none of the varnishes acted dangerously. The test results given in Table 3 show that in the absence of oxygen, copper has no deleterious effect on the oil; also, if the copper is protected from contact with the oil by varnish, then the varnish is more likely to damage the oil than is the copper. This, too, is not observed in tests with exposure to atmosphere. Iron insulated with paper has less effect on the oil than iron insulated by varnish, which is again the opposite of what is observed when there is access to air during the tests.

Card2/4

110-S8-6-9/22

The Influence of Solid Insulating Materials on Transformer Oil in  
the Absence of Oxygen

Most types of solid insulation had little effect on the chemical properties of the oil but varnished cloth caused an increase in the neutralisation value and particularly in the content of low-molecular-weight acids. Oil-resistance rubber increased the power factor of the oil and a white deposit was formed that contained zinc and presumably resulted from decomposition of the rubber. The rubber itself did not swell by more than 10%, which is the limiting value in the appropriate standard and as it obviously had a deleterious effect on the oil, it follows that the standard is inadequate. Bakelised paper tubes increased the power factor of the oil, presumably because the bakelite varnish was not thoroughly polymerised, for the varnish alone had no such effect.

Card 3/4

11C-58-6-9/22

The Influence of Solid Insulating Materials on Transformer Oil in  
the Absence of Oxygen

There are 4 tables and 4 references, 3 of which are Soviet  
and 1 English.

ASSOCIATION: Moskovskiy transformatornyy zavod (Moscow Transformer  
Works) and VTI

SUBMITTED: December 9, 1957

Card 4/4      1. Oils--Insulations    2. Transformers--Materials

KOZLOV, Yu.A., inzh.; POLYAKOV, A.L., inzh.; SOKOLOVA, S.L., inzh.

Cast insulation from MBK-1 compound for instrument transformers.  
Vest.elektroprom. 31 no.2:12-17 F '60. (MIRA 13:6)  
(Electric insulators and insulation)  
(Electric measurements)

VEYSBRUT, L.A.; SOPIN, P.F., kand. tekhn. nauk; ZASOSOV, M.V.;  
SOKOLOVA, S.L.

Combining the oxidation and regeneration of the oxidant in  
the production of oxalic acid. Trudy VNIITP no. 18:213-220  
'61.  
(MIRA 17:1)

BREYTVEYT, Konstantin Vasil'yevich; KORITSKIY, Yuriy Vladimirovich;  
KULAKOVA, Revekka Viktorovna; SOKOLOVA, Serafima  
Leonidovna; RYZHIKHINA, Ye.G., red.; BUL'DYAYEV, N.A.,  
tekhn. red.

[Manufacture, properties, and application of cellulose  
electric insulating papers and cardboards] Proizvodstvo,  
svoistva i primenie elektroizoliatsionnykh tselliuloz-  
nykh bumag i kartonov. [By] K.V.Breitveit i dr. Moskva,  
Gosenergoizdat, 1963. 319 p. (Polimery v elektroizoliatsion-  
noi tekhnike, no.7) (MIRA 17:2)

SOKOLOV, V.Ye.; SOKOLOVA, S.M.

Role of Calligonum fruit in winter feeding of the suslik Spermophilopsis leptodactylus Licht. Zool. zhur. 39 no.5:787-788 My '60.

(MIRA 13:10)

1. Chair of Vertebrate Zoology, Moscow State University.  
(Kara Kum—Susliks) (Calligonum)  
(Animals, Food habits of)

SOKOLOVA, S. M.

Sokolova, S. M.

"The physiological characteristics of winter and spring wheat." Moscow  
Order of Lenin and Order of Labor Red Banner State U imeni M. V.  
Lomonosov. Moscow, 1956 (Dissertation for the degree of Candidate  
in Biological Science)

Knizhnaya letopis'  
No. 25, 1956. Moscow

SOKOLOVA, S.M.

Characteristics of the physiological properties of winter and spring wheats. Dokl.Akad.sel'khoz.21 no.12:15-21 '56. (MLRA 10:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova. Predstav-  
lena akademikom I.V.Yakushkinym.  
(Wheat)

SOKOLOVA, S.M.

Effect of light of varying spectral composition on some physiological processes in wheat. Vest. Mosk. un. Ser. biol., pochv., geol., geog.  
13 no. 4:29-37 '58. (MIRA 12:4)

1. Kafedra fiziologii rasteniy Moskovskogo universiteta.  
(Wheat) (Plants, Effect of light on)

SOKOLOVA, S.M.

Some physiological characteristics of roses. Biul. Glav. bot.  
sada no.41:92-94 '61. (MIRA 14:11)

1. Glavnnyy botanicheskiy sad AN SSSR.  
(Roses) (Catalase)  
(Plants, Effect of temperature on)

SOKOLOVA, S.M.

Changes of nitrogenous substances in leaves of perennial  
wheat. Biul. glav. bot. sada no. 43:56-63 '61. (MIRA 15:2)

1. Glavnnyy botanicheskiy sad AN SSSR.  
(Wheat)

SOKOLOVA, S.M.

Transformation of nitrogenous substance during the ripening  
of perennial wheat grains. Biul.Glav.bot.sada no.44:58-62 '61.  
(MIRA 15:2)

1. Glavnnyy botanicheskiy sad AN SSSR.  
(Wheat) (Nitrogen metabolism)

BLAGOVESHCHENSKIY, A.V.; SOKOLOVA, S.M.

Biochemical characteristics of perennial wheats. Bot.zhur. 46  
no.6:886-889 Je '61. (MIRA 14:6)

1. Glavnny botanicheskiy sad AN SSSR, Moskva.  
(Wheat) (Biochemistry)

SOKOLOVA, S.M.

Nitrogen metabolism during the ripening of perennial wheat. Biul.  
MOIP.Otd.biol. 67 no.3:145 My-Je '62. (MIRA 15:11)  
(Nitrogen metabolism) (Wheat)

2

SOKOLOVA, S.M., KAMZOLKIN, V.V., ANDREYEVA, T.P.

Obtaining cyclododecanol by liquid-phase oxidation of cyclododecane

Report to be submitted for the Sixth World Petroleum Congress,  
Frankfurt, 16-26 June 63

SOKOLOVA, S.M.; TIUNOVA, N.A.

Irreplaceable amino acid content in the herbage of corn and the  
perennial wheat M-2. Biul.Glav.bot.sada no. 48:53-56 '63.  
(MIRA 17:5)

1. Glavnny botanicheskiy sad AN SSSR.

SOKE UWAy N a Me

Transformation of nitro-phenolic substances in perennial wheat,  
Bulg. Mol. Otd. biol. 66 no.3174-81 My-Je '63.  
(MIRA 17:3)

SOKOLOVA, S.M.; TIUNOVA, N.A.

Results of research work on the biochemical and physiological characteristics of the perennial M-2 wheat. Biokhim. zер. i khlebopech. no.7:101-116 '64. (MIRA 17:9)

1. Glavnnyy botanicheskiy sad AN SSSR, laboratoriya fiziologii razvitiya rasteniy.

IMAYEV, M.G.; SOKOLOVA, S.V.; FEKLYAYEVA, S.R.

Synthesis of salts and thioanhydrides of certain O,O-diaryl-dithiophosphoric acids, Zhur. ob. Khim., 35 no.4:742-743 Ap '65.  
(MIRA 18:5)

l. Bashkirskiy gosudarstvennyy universitet.

TURKINA, M.V.; KURSANOV, A.L.; SOKOLOVA, S.V.

Competition of sugars during their penetration into cells.  
Fiziol. rast. 11 no.5:800-811 S-O '64. (MIRA 17:10)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy  
of Sciences, Moscow.

KUDRIN, A.I.; BURINA, M.V.; MOKOJOVA, S.V.

Transformation of sugars penetrating plant cells. Fiziol. rast.  
11 no.4:569-580 Jl-Ag '64. (MIRA 17:11)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of  
Sciences, Moscow.

VASIL'YEV, A.M.; SOKOLOVA, S.V.

Farmers reducer as reagent for some trinitrophenols. Trudy KKHTI  
(MIRA 12:11)  
no.11:76-77 '47.  
(Picric acid) (Ferricyanides) (Alkali metal thiosulfates)

SHUL'GIN, I.A.; PODOL'NYY, V.Z.; SOKOLOVA, S.V.

A method for rapid determination of the chlorophyll content. Fiziol.  
rast. 10 no.3:383-386 My-Je '63. (MIRA 16:6)

1. K.A.Timiriazev Institute of Plant Physiology, U.S.S.R. Academy  
of Sciences, Moscow and Laboratory of Biology of Plant Development,  
Moscow State University.  
(Chlorophyll) (Plants—Chemical analysis)

"APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652120001-3

BUKOVSKA, V. V., S. V. KERZHNIKOV, G. A. POGREBNOV,  
S. V. SOKOLOVA,  
UDC 666.765.4.01:666.765.4.01, Tsvet. met.

Behavior of refractories in furnaces of oxygen suspension  
smelting. Tsvet. met. 37 no. 11s58-59 N 1981. (MIRA 186.)

APPROVED FOR RELEASE: 08/25/2000

CIA-RDP86-00513R001652120001-3"

KISHCHENKO, L.V.; SOKOLOVA, T.A.

Research on the effectiveness of mineral fertilizers in experiment ponds of the "Shemetovo" Fish Farm. Report No.2: Phytoplankton of the experiment ponds. Trudy Biol. sta. na oz. Naroch! no.1:95-112 '58.  
(MIRA 12:7)

(Fish ponds) (Phytoplankton)

IVANOVA, Ye.N.; ROZOV, N.N.; YEROFEEVA, A.A.; MOGIL'NIK, N.N.; NOSIN, V.A.; UFIKTSEVA, K.A.; Prinimali uchastiye: IVANOVA, Ye.N.; KOLOVYI, N.I.; BUDINA, I.P.; VISHNEVSKAYA, I.V.; GERASIMOV, I.P.; KARAVAEVA, N.A.; KOSHELEVVA, I.T.; MAUKH, Ye.M.; SEMINA, Ye.V.; SOKOLOV, I.O.; SOKOLOVA, T.A.; TARGUL'YAN, V.O.

New materials on general geography and soil classification of the polar and boreal belts of Siberia. Pochvovedenie no.11:7-23 M '61. (MIRA 14:12)

(Siberia, Northern--Soils--Classification)

(Siberia, Northern--Geography)

SOKOLOV, I.A.; SOKOLOVA, T.A.

Zonal types of soils in regions of perennial frost. *Pochvovedenie*  
no.10:23-32 O '62. (MIRA 15:11)

1. Pochvennyy institut im. V.V. Dokuchayeva.  
(Transbaikalia--Frozen ground)

DOROKHOVA, K.Ya.; SOKOLOVA, T.A.

Chemical composition of the layer covering the grains of primary  
minerals in some mountain-taiga soils of eastern Transbaikalia.  
Pochvovedenie no.10:34-36 O '63. (MIRA 16:12)

1. Pochvennyy institut imeni V.V.Dokuchayeva.

POLYAKOVA, T.A.; SOKOLOVA, T.A.; TSARFIN, Ya.A.

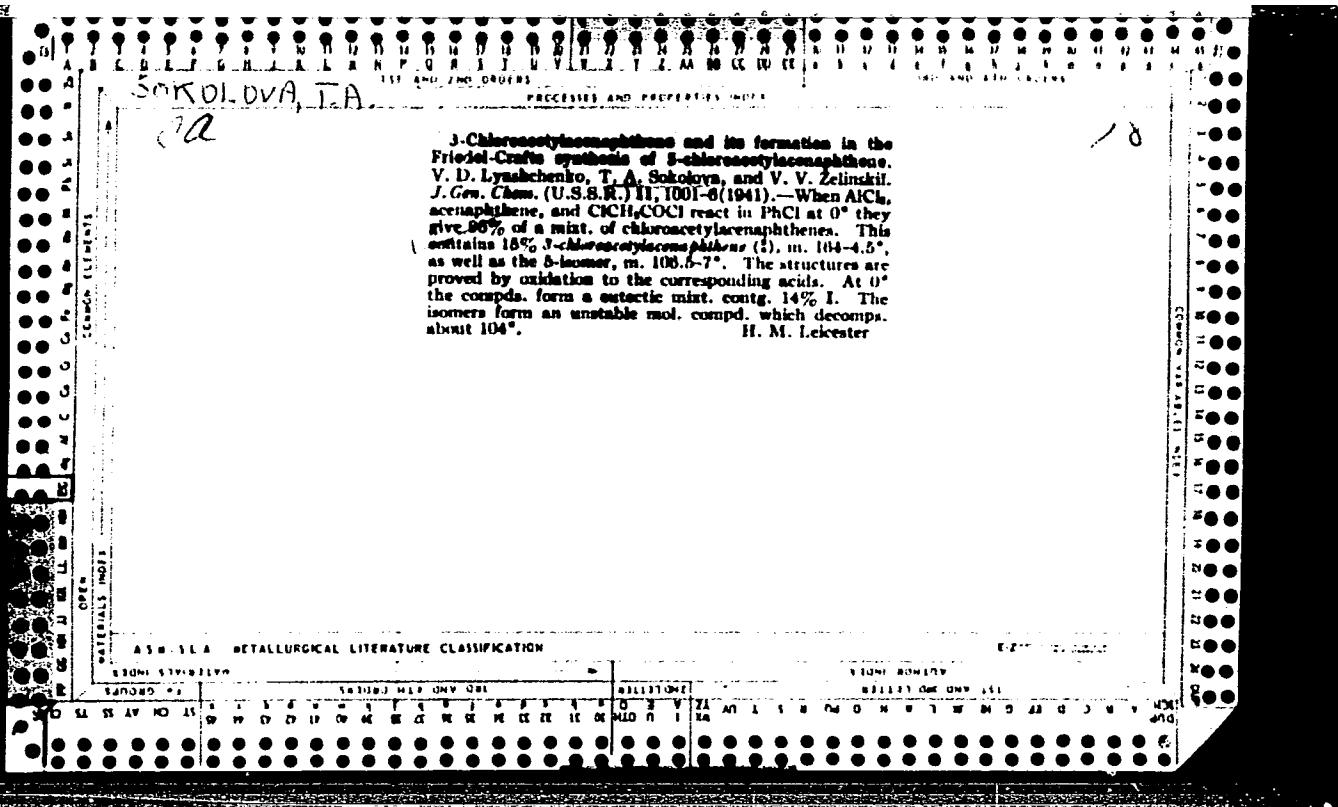
Chromatographic determination of furan and carbon dioxide in  
the products of furfurole decarbonylation. Zav.lab. 29 no.1:  
18-19 '63. (MIRA 16:2)

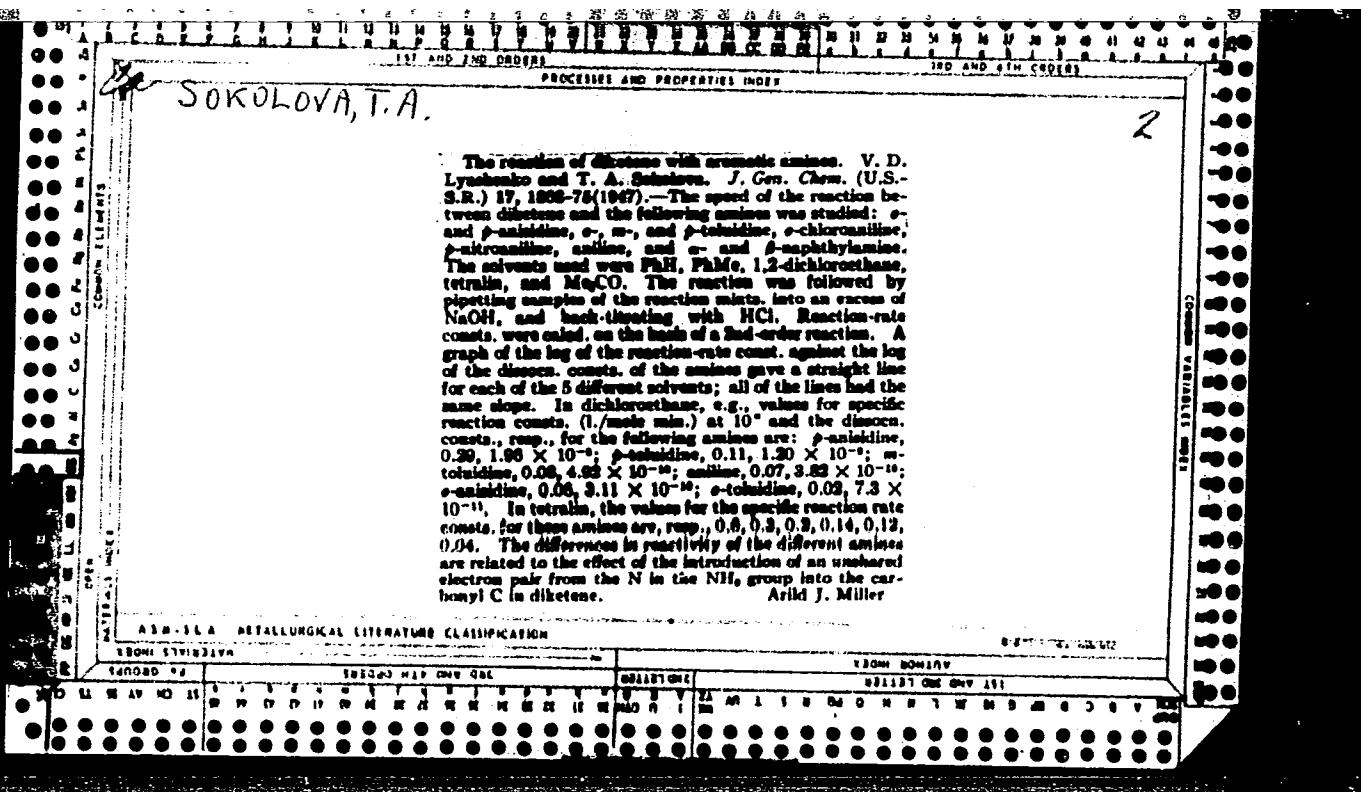
1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh  
smol.  
(Furan) (Carbon dioxide) (Chromatographic analysis)

POLYAKOVA, T.A.; SOKOLOVA, T.A.; TSARFIN, Ya.A.

Analysis of the products of the catalytic hydrogenation of  
furan by the method of gas-liquid chromatography. Zav. lab.  
29 no.6:664-665 '63. (MIRA 16:6)

1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol.  
(Furan) (Hydrogenation)  
(Gas chromatography)





*Sokolova, V. A.*

Preparation of *N*-vinylphthalimide. T. A. Sokolova.  
Zhur. Priklad. Khim. 28, 1142-4 (1955). Item no. 62

$\text{C}_6\text{H}_5(\text{CO})_2\text{NK}$  with 220 g.  $(\text{CH}_3)_2\text{Br}$ ; 12 hrs. at 180-00° with stirring, followed by distn. of excess bromide *in vacuo*, treatment with cold  $\text{H}_2\text{O}$  and filtration gave crude *N*-(2-bromoethyl)phthalimide, m. 78° (from aq. EtOH), which is used directly in the next step. The product (42.6 g.) is stirred at 25° with 45 ml. 8*N* NaOH, allowed to stand overnight, and acidified to Congo red with HCl, the soln. evapd. to dryness, the residue heated in an open dish 2 hrs. at 150°, and the crushed product ground with  $\text{H}_2\text{O}$  and boiled with 250 ml.  $\text{H}_2\text{O}$ . The undissolved matter is the diphthalimidoethane (1.7 g.), while the combined filtrates, after decolorizing, were allowed to stand overnight, yielding 72% *N*-(2-hydroxyethyl)phthalimide, m. 125-7°. This (38.2 g.) with 40.4 g. Ac<sub>2</sub>O refluxed 2 hrs. gave the acetate, m. 89-90°. This (30.39 g.) in 40 ml. AcOH dropped slowly into a tube over 3.5 hrs. with porcelain chips heated to 60-75° yielded, on distn. of AcOH from the catalyst, 25 g. *N*-vinylphthalimide, m. 73-7°, after washing with  $\text{H}_2\text{O}$ .

G. M. Kosolapoff

SOKOLOVA, T.A.

*Chm* ✓ Ketene dimer [diketene]. V. V. Perekalin and T. A. Sokolova. *Uspekhi Khim.* 25, 1351-72 (1956). A detailed review, with 102 references through 1955, of prep., properties, and reactions of ketene dimers. G. M. K.

PM MIT

0513R001652120001-3

476

AUTHORS: Koton, M. M.; Sokolova, T. A.; and Chetyrkina, G. M.

TITLE: Synthesis of N-Substituted Methacrylamides. Part 1. Carboxy-  
and Carbalkoxy-phenylmethacrylamides (Sintez N-zameshchennykh  
metakrilamidov. I. Karboksi- i karbalkoksiferilmekrilmamidy)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, No. 1, pp. 185-189  
(U.S.S.R.)

ABSTRACT: Carboxy- and carbalkoxyphenylmethacrylamides are polymerizable monomers. In order to synthesize substituted amides of methacrylic acid, the authors began with their acid chlorides and following in the Patai (2) steps utilized equimolecular amounts of acid chloride and aromatic amine. It was discovered that the reaction in this case does not reach the end because a part of the amine is consumed for salt formation together with the hydrogen chloride forming during the reaction. For this reason the authors choose the Bryant, Mitchel (5) method (used in the derivation of p-bromophenylmethacrylamide) which consists in the reaction of moles of amine per 1 mole methacrylic acid chloride. The basic amines for carboxyphenylmethacrylamides were obtained by esterification of o-, m- and p-aminobenzoic acids by heating the latter with methyl, ethyl, or butyl alcohol saturated with dry hydrogen chloride.

Card 1/2

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Synthesis of N-Substituted Methacrylamides

The basic aminobenzoic acids and their esters have low basicity and their salts are therefore easily hydrolyzable.

The obtained N-substituted methacrylamides were analyzed for their carbon, hydrogen and nitrogen contents by employing the micro-combustion method. The analysis results and the properties of the obtained amides are described in the table; the melting points are corrected in every instance.

One table. There are 10 references, of which 2 are Slavic.

ASSOCIATION: Academy of Sciences USSR, Institute of High Molecular Compounds  
(Institut Vysokomolekulyarnykh Soyedineniy Akademii Nauk SSSR)

PRESENTED BY:

SUBMITTED: February 17, 1956

AVAILABLE:

Card 2/2

SOKOLOVA, T.A.

Synthesis of N-substituted methacrylamides. Part 2: N-arylmethacrylamides. Zhur. ob. khim. 27 no.8:2205-2208 Ag '57. (MIRA 10:9)

1. Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR.  
(Methacrylamide)

KOTON, M.M.; SOKOLOVA, T.A.; SIVITSKAYA, M.S.; KISELEVVA, T.M.

Synthesis of N-substituted methacrylamides. Part 3; N-alkylacryl-  
and N-alkylmethacrylamides. Zhur. ob. khim. 27 no.3:2239-2243 Ag  
1957. (MEI 1059)

1. Institut vysokomolekuljarnikh soedinenij Akademii nauk SSSR.  
(Methacrylamide)

## AUTHORS:

Koton, E. E., Sekelova, T. A., Savitskaya, L. N.,  
Kiseleva, T. S.

## TITLE:

Cases of Polymerization Inhibition of the Monomers From the Arylmethacrylate Series (Sluchai zatrudneniya polimerizatsii monomerov ryadya arilmetakrilatov).

## PERIODICAL:

Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 417-421 (USSR).

## ABSTRACT:

In the polymerization of arylmethacrylates it was found that the arylmethacrylates, which in the phenyl radical have the substituents in the ortho-position to the acyl radical, polymerize much more slowly than the corresponding para-isomers, independently of the character of the substituents. The polymerization conditions, the obtained results, as well as various methacrylates are shown in the table. The difference in the polymerization velocity between the methacryl ether of thymol and the methacryl ether of menthol is explained by the fact that the carbon atoms of the cyclohexane ring in the menthol ether are not arranged in one plane and thus the whole molecule is not as rigid as that of the thymol ether. In all given cases the polymerization inhibition can be explained by the screening effect of voluminous groups on the double binding. They disturb the access to the double binding of the free radicals of the benzoylperoxide which are volumi-

Card 1/2

Cases of Polymerization Inhibition of the Monomers From the Aryl-methacrylate Series. 79-2-30/64

nous, too. The experimental conditions as well as the properties of the monomers and polymerization data are given. Special data are given for the methacrylethers of p-cresol, guaiacol, p-methoxyphenol, o - oxybenzylphenyl, thymol, and menthol which hitherto have not yet been described in technical literature.

There are 1 table, and 2 Slavic references.

ASSOCIATION: Institute for High-molecular Compounds AS USSR (Institut vysokomolekul'nykh soyedineniy Akademii nauk SSSR).

SUBMITTED: January 11, 1957.

AVAILABLE: Library of Congress.

Card 2/2

AUTHORS: Sokolova, T. A., Ovsyannikova, L. A. 73-28-5-48/61

TITLE: The Synthesis of the N-Substituted Methacrylamides (Sintez N-zameshchennykh metakrilamidov). IV. The Acylation of Aromatic Amines With the Chloroanhydride of Methacrylic Acid in Aqueous Medium (IV. Atsilirovaniye aromaticheskikh aminov khlorangidridom metakrilovoy kisloty v vodnoy srede)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 779-782 (USSR)

ABSTRACT: The observed difference between the hydrolysis velocity of chloroanhydride of methacrylic acid and that of its action on aromatic amines enabled the authors to try the acylation reaction of the amines in aqueous medium. Earlier the N-aryl-methacrylamides were produced among organic solvents (references 1,2). The experiments proved that the N-acrylmethacrylamides can be obtained with good yields in the case of adding one mole of chloroanhydride of methacrylic acid to the emulsion, consisting of 2 mols of the aromatic amine in water, and of subsequent good mixing. The second mole of the amine binds the molecule of hydrochlorine separating in the reaction by

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The Synthesis of the N-Substituted Methacrylamides. IV. The 79-28 3-48/61  
Acylation of Aromatic Amines With the Chlorocanhydride of Methacrylic Acid in Aqueous Medium

entering the aqueous solution as hydrochloric salt. The formed N-arylmethacrylamide separates either in form of a thin film or in solid state and can be separated by filtering the extract. The reaction products have a marked melting point and are easily to be obtained in pure state the usual way. The results of the experiments are given in a table. The acylation reaction can also be replaced by the substitution of one mole of the initial amine by a molecule of dimethylamine the yields not becoming smaller. With equimolecular amounts of the reaction products the yield of N-arylmethacrylamide decreases by half with the exception of p-dimethylaminophenylmethacrylamide, as the initial product, p-dimethylphenylenediamine, is capable of binding the hydrocarbon at the expense of its dimethylamino group. This method was tried with 14 aromatic amines. However, five amides not yet described in publications were synthesized: p-iodo-, m-fluoro-, p-fluoro-, m-methoxy- and p-dimethylamino-phenylmethacrylamide. It was shown that this method of the acylation of weak basic amines can not be used with the chloro-

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The Synthesis of the N-Substituted Methacrylamides. IV. The 79-28 3-48/61  
Acylation of Aromatic Amines With the Chlorocanhydride of Methacrylic  
Acid in Aqueous Medium

anhydride of methacrylic acid.

There are 1 table and 4 references, 2 of which are Soviet.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR  
(Institute for High-Molecular Compounds, AS USSR)

SUBMITTED: February 16, 1957

Card 3/3

CHETYRKINA, G.M.; SOKOLOVA, T.A.; KOTON, M.M.

Polymerization of  $\text{N}$ -Carboxy- and  $\text{N}$ -carbalkoxyphenylmethacryl-amides. Vysokom. soed. 1 no.2:248-253 7 '59.  
(MIRA 12:10)

1. Institut vysokomolekulyarnykh soyedinennykh AN SSSR.  
(Polymerization) (Amides)

SOKOLOVA, T.A.; CHETYRKINA, G.M.; NIKITIN, V.N.

Hydrogen bond and polymerization capacity of o-, m- and p-substituted N-phenylmethacrylamides. Part III. Vysokom. soed. 1 no. 4: 506-510 Ap '59. (MIRA 12:9)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
(Bonds(Chemistry)) (Polymerization) (Methacrylamide)

SOKOLOVA, T.A.; CHETYRKINA, G.M.; NIKITIN, V.N.

Hydrogen bond and the polymerization capacity of o-, m-, and  
p-substituted N-phenylmethacrylamides. Part 4. Vysokom.sosed.  
I no.11:1599-1603 N '59. (MIRA 13:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
(Methacrylamide) (Hydrogen)

5(3)  
AUTHORS:

TITLE:

PERIODICAL:

ABSTRACT:

Sokolova, T. A., Nikitin, V. N.

Hydrogen Bond and Polymerization Properties of o-, m-, and p-Alkoxy-phenylmethacrylamides (Vodorodnaya svyaz' i sposobnost' k polimerizatsii orto-, meta- i paraalkoksifenilmetakrilamidov). Communication 1 (Soobshcheniye 1)

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,  
1959, Nr 3, pp 511-515 (USSR)

SOV/62-59-3-19/37

In the present paper the attempt was made to explain the effect of the hydrogen bond on the capability of the monomer of undergoing polymerization in the mass. A number of N-alkoxy-phenylmethacrylamides was investigated: ortho-, meta-, and para-ethoxyphenylmethacrylamides and ortho-, meta-, and para-methoxyphenylmethacrylamides. Synthesis and properties of these compounds had been described previously (Refs 8,9). In the investigation of the polymerizability of the monomers synthesized it was found that the rate of their polymerization was different. The experimentally obtained data are presented in table 1. (L. A. Ovsyannikova took part in this work). It was found that the ortho-isomers of alkoxy-phenylmethacrylamides easily polymerize. Para-isomers polymerize

card 1/3

Hyd

~~Polymerization Properties of Alkoxy-phenylmethacrylamides. Communication 1~~

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652120001-3" SOV/62-59-3-19/37

more difficultly and meta-isomers polymerize under the same conditions quite insignificantly. In order to explain this difference their infrared absorption spectra were investigated. In the range 2.8-3.2  $\mu$  infrared absorption spectra of all monomers synthesized in solid and molten state as well as in  $CCl_4$ -solution were obtained (Table 2). These spectra indicated that in meta- and para-isomers an intermolecular hydrogen bond occurs. In ortho-isomers such a bond is lacking. In comparing the results obtained it was found that the polymerization of isomers without hydrogen bond proceeds readily. In meta- and para-isomers having a hydrogen bond the polymerization is rendered difficult. Accordingly the polymerizability of these isomers is reduced by the hydrogen bond. In the presence of such a bond the reactivity can be reduced both due to steric reasons and to the small mobility of associated molecules, i.e. if only little collisions take place between active molecules. It is further not impossible that under the influence of the hydrogen bond the electronic density in the vinylgroup varies which must affect the activity of this group.

Card 2/3

Hydrogen Bond and Polymerization Properties of  
o-, m-, and p-Alkoxy-phenylmethacrylamides. Communication 1

SOV/62-39-3-19/37

There are 2 figures, 2 tables, and 10 references, 9 of which  
are Soviet.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR  
(Institute of High-molecular Compounds of the Academy of  
Sciences, USSR)

SUBMITTED: July 6, 1957

Card 3/3

BUSEV, A.I.; TIPTSOVA, V.G.; SOKOLOVA, T.A.

Stability constants of chloride and bromide complexes of trivalent  
thallium. Vest. Fizk. un. Ser. 2:42-45 N-D '60. (NIPA 14:2)

1. Kafedra analiticheskoy khimii Moskovskogo universiteta.  
(Thallium compounds)

15.8105 2209

86296  
S/190/60/002/008/008/017  
B004/B054

AUTHORS: Chetyrkina, G. M., Sokolova, T. A., Koton, M. M.  
TITLE: Polymerization of Substituted N-Phenyl Methacrylamides. II  
PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 8,  
pp. 1207-1212

TEXT: The authors studied the effect of the structure of monomers on their capability of polymerization. Five new derivatives of methacrylic acid were synthesized for this purpose: p-carbamino-, p-methyl-carbamino-, p-cyano-phenyl methacrylamide, as well as p- and o-carbethoxy-phenyl methacrylate. Besides, the known phenyl methacrylate was produced for comparison. The synthesis was carried out by reaction of the corresponding aromatic amines with methacrylic chloride in the presence of dimethyl aniline. The method had been described in Ref. 3. Polymerization was conducted in dimethyl formamide in the presence of 0.3% benzoyl peroxide at 75°C. The results are as follows: 1) An introduction of electrophilic substituents into the phenyl radical of the methacrylamide accelerates polymerization. According to their accelerating effect, the substituents

Card 1/2

86296

Polymerization of Substituted N-Phenyl  
Methacrylamides. II

S/190/60/002/008/008/017  
B004/B054

form the following order:  $\text{-COOH} > \text{-COOC}_2\text{H}_5 > \text{-CN} > \text{-CONHCH}_3 > \text{-CONH}_2 > \text{-H}$ .

2) Phenyl methacrylamines polymerize faster than phenyl methacrylates. Thus, the substitution of the  $-\text{NH-CO-}$  group by  $-\text{O-CO-}$  reduces the polymerization rate. 3) p-carboxy-phenyl methacrylate polymerizes faster than its ortho-isomer. An introduction of polar groups such as CN,  $\text{CONH}_2$ ,  $\text{CONHCH}_3$  into the phenyl radical of the methacrylamide produces an

increase in the softening temperature (up to  $300^\circ\text{C}$ ) and in brittleness. The vitrification temperature of substituted polymeric N-phenyl methacrylamides is higher than that of analogous polyphenyl methacrylates. There are 1 figure, 2 tables, and 17 references: 6 Soviet, 2 US, 8 German, and 1 French.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR  
(Institute of High-molecular Compounds of the AS USSR)

SUBMITTED: March 26, 1960

Card 2/2

BUSEV, A.I.; TIPTSOVA, V.G.; SOKOLOVA, T.A.

Reaction of trivalent thallium with disodium ethylenediaminetetraacetate. Zhur. neorg. khim. 5 no. 12:2749-2758 D '60.  
(MIRA 13:12)

l. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.  
(Thallium compounds) (Acetic acid)

SOKOLOVA, T.A.; CHETYRKINA, G.M.

Polymerization of N-substituted methacrylamides. Part 3: N,N-disubstituted methacrylamides. Vysokom. soed. 3 no.2:244-247 F '61.  
(MIRA 14:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
(Methacrylamide)

SOKOLOVA, T.A.; CHETYRKINA, G.M.; OVSYANNIKOVA, L.A.

Polymerization of N-substituted methacrylamides. Part 4. Vysokom.  
soed. 3 no.4:582-584 Ap '61. (MIRA 14:4)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
(Methacrylamide)

SOKOLOV, T.A.; RUDKOVSKAYA, G.D.

Cyclic polymerization. Part 1: N-Methyldimethacrylamide. Vysokom.  
soed. 3 no.5:706-710 My '61. (MIRA 14:5)

1. Institut vysokomolekuljarnykh soyedineniy AN SSSR.  
(Methacrylamide)

21425  
S/079/61/031/007/007/008  
D229/D305

15.8080

AUTHORS:

Sokolova, T.A., and Tikhodeyeva, I.I.

TITLE:

Synthesis of N-substituted methacrylamides. V. N,N'-alkylenedimethacrylamides

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 7, 1961,  
2222 - 2224

TEXT: The paper describes the first synthesis and characterization of N,N'-ethylene-, 1,2 propylene - hexamethylene, and decamethylene dimethacrylamides. As acylating agents, methacrylic acid chloride (MAC) and methacrylic acid anhydride (MAA) were used. Reaction of MAC with alkylene diamines required equimolar quantities of the reactants. Owing to the high basicity of the diamines, the reaction is strongly exothermic. Reaction of the diamines (1 mole) with MAA (2 moles) gave high yields of the desired products. It was also observed that ethylene diamine reacts with methacrylic acid giving a salt, and not an addition product across the double

Card 1/3

24425

S/079/61/031/007/008  
D229/D305

Synthesis of N-substituted ...

ASSOCIATION: Institut visokomolekulyarnykh soyedineniy, Akademii  
nauk, SSSR (Macromolecular Compounds Institute, Academ-  
my of Sciences, USSR)

SUBMITTED: July 16, 1960

X

Card 3/3

SOKOLOVA, T.A.; RUDKOVSKAYA, G.D.

Synthesis of N-Substituted methacrylamides. Part 6: N-methyldimethacrylamide. Zhur. ob. khim. 31 no. 7:2224-2226  
Jl '61.

(MIRA 14:7)

1. Institut vysokomolekulyarnykh soyedineniy Akademii nauk  
SSSR.  
(Methacrylamide)

SOKOLOVA, T.A.; OVSYANNIKOVA, L.A.

Synthesis and properties of 1-dimethylamino-3-methyl-2-azetidinone.  
Dokl. AN SSSR 143 no.1:140-142 Mr '62. (MIRA 15:2)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
Predstavleno akademikom A.Ye.Arbusovym.  
(Azetidinone)

ACCESSION NR: AT4020710

S/0000/63/000/000/0213/0215

AUTHOR: Chety\*rkina, G. M.; Sokolova, T. A.; Koton, M. M.

TITLE: Polymerization of N-substituted methacrylamides. V. Ring formation in the polymer chains

SOURCE: Karbotsevny\*ye Vy\*sokomolekulyarny\*ye soyedineniya (Carbon-chain macromolecular compounds); sbornik statey. Moscow, Izd-vo AN SSSR, 1963, 213-215

TOPIC TAGS: ring formation, deamination, polymethacrylamide, N-substituted methacrylamide, N-aryl methacrylamide, phenylmethacrylamide, carboxyphenyl-methacrylamide, p-carbethoxyphenylmethacrylamide, polymerization

ABSTRACT: The possible formation of a ring structure upon the partial thermal deamination of poly-N-aryl-methacrylamides, such as polyphenyl-, poly-p-carboxyphenyl- and poly-p-carbethoxyphenyl methacrylamide, was investigated by heating the polymers in a vacuum (3 mm.) at 270-320C. According to the theoretical equation, an amine molecule splits off and a six-membered ring is formed. Ring formation was shown by the change in the nitrogen content of the polymers, the change in their solubility, and by the nature of the resulting reaction products. It was found that the deamination of poly-N-aryl methacrylamides proceeds in a more complicated manner than that of poly-N-alkyl methacrylamides

Card 1/2

ACCESSION NR: AT4020710

and that the ring formation is not complete. On heating polyphenylmethacrylamide at 320C in a vacuum for 2 hours, a soluble polymer with rings in the chain was obtained in a yield of 56.0%. The properties of all the methacrylamides investigated are reported before and after deamination, and the perimental conditions for deamination and polymerization are described. "T.A. Vorotilova also took part in the work." Orig. art. has: 3 tables.

ASSOCIATION: Institut vy\*sokomolekulyarny\*kh soyedineniy AN SSSR (Institute of Macromolecular Compounds, AN SSSR)

SUBMITTED: 02Jul62

DATE ACQ: 20Mar64

ENCL: 00

SUB CODE: OC

NO REF SOV: 005

OTHER: 000

Card 2/2

SOKOLOVA, T.A.; OVSYANNIKOVA, L.A.

Synthesis of N-substituted acrylamides. Izv. AN SSSR. Ser.khim.  
no.9:1658-1659 S '63. (MIRA 16:9)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
(Acrylamide)

SOKOLOVA, T.A.; OVSYANNIKOVA, L.A.; TIKHODEYEVA, I.I.

Synthesis of N-substituted methacrylamides. Part 7. Zhur. ob.  
khim. 33 no.5:1502-1504 My '63. (MIRA 16:6)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
(Methacrylamide)

L 13678-63

EPR/EWP(j)/EPF(e)/ENT(m)/BDS/ES(s)-2 AFFTC/ASD/ESD-3/SSD

Ps-4/Pc-4/Pr-4/Pt-4 RM/WW

ACCESSION NR: AP3003773

s/0080/63/036/006/1335/1341

84  
82

AUTHOR: Koton, M. M.; Dobretsov, S. L.; Sokolova, T. A.

TITLE: Preparation and study of the properties of copolymers of N-substituted methacrylamides with styrene and methyl methacrylate

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 6, 1963, 1335-1341

TOPIC TAGS: styrene, methyl methacrylate, N-substituted methacrylamide, copolymer, o-biphenylmethacrylamide, p-biphenyl methacrylamide, alpha-naphthylmethacrylamide, beta-naphthylmethacrylamide, triethylamine, increased heat resistance, increased impact strength, dielectric property, temperature frequency dependence, loss tangent, dielectric constant, softening point, N-substituted methacrylamide-methyl methacrylate copolymer

ABSTRACT: The effect of N-substituted methacrylamides on the heat resistance and dielectric properties of the copolymers of such amides with styrene or methyl methacrylate has been investigated. The following N-substituted amides were used as monomers: N-o-biphenyl- (I); N-p-biphenyl- (II); N- $\alpha$ -naphthyl- (III); and

Card 1/2

L 13678-63

ACCESSION NR: AP3003773

2

N- $\beta$ -naphthylmethacrylamide (IV). Monomer I was synthesized for the first time by Sokolova et al. in 1959. The monomers were prepared from the aromatic amine by acylating it with methacryloyl chloride in the presence of triethylamine to neutralize the evolving HCl. The copolymers were obtained by bulk polymerization of the components with 0.3--0.6% benzoyl peroxide, with a single step increase in temperature. The data on composition, polymerization conditions, degree of conversion, and dielectric properties are tabulated for the 26 copolymers obtained, which were solid colorless thermoplastic materials. The dielectric properties were determined in the temperature range from -180 to 200°C, at 400, 1000, and 5000 cps with an MLE device and at 50--7000 kc with a Q-meter. The temperature dependences of the loss tangent and dielectric constant and the frequency dependences of the loss tangent are plotted for the copolymers. The dielectric properties of the copolymers approximate those of polystyrene or poly(methyl methacrylate). The softening point of the copolymers increases with an increase in the N-substituted methacrylamide content. Orig. art. has: 3 tables and 3 figures.

ASSOCIATION: Institut vy\*sokomolekulyarny\*kh soyedineniy AN SSSR (Institute of Macromolecular Compounds, AN SSSR)

SUBMITTED: 12May62  
SUB CODE: CH

DATE ACQ: 07Aug63  
NO REF SOV: 003

ENCL: 00  
OTHER: 003

Card 2/2

ZAPEVALOVA, N.P.; SOKOLOVA, T.A.; BAZHENOV, N.M.; KOL'TSOV, A.I.

Method of preparing N-substituted  $\beta$ -lactams. Dokl. AN SSSR  
150 no. 3:551-554 My '63.

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.  
Predstavлено академиком A.Ye. Arbuzovym.  
(Lactams)

KUN DE-CHZHEN [K'ung Tê-chêng]; CHETYRKINA, G.M.; SOKOLOVA, T.A.;  
KOTON, M.M.

Polymerization of substituted N-phenylacrylamides. Part 6.  
Vysokom. soed. 6 no.1:149-152 Ja'64. (MIRA 17:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

3.1. NIKITIN, V.N.

Highly Pending release of polycarbonate of 1,4-phenylene  
bis(4-phenylcinnamyl iodide. Part 5. RTR 10. 3rd.  
Conf. 10150-715. Date:

1. Highly recommended by the Ministry of Defense.

SOKOLOVA, T.A.; KOL'TSOV, A.I.; ZAPEVALOVA, N.P.; OVSYANNIKOVA, L.A.

Interaction of N,N-dimethylhydrazine with derivatives of  $\alpha, \beta$ -unsaturated acids. Izv. AN SSSR. Ser. khim. no. 9:1727 S '64.  
(MIRA 17:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

ZAPEVALOVA, N.P.; SOKOLOVA, T.A.

Interaction of asymmetrically disubstituted hydrazines with  
derivatives of  $\alpha, \beta$ -unsaturated acids. Report No.1: Formation  
of 1,1-dimethyl-3-pyrazolinium oxides. Izv. AN SSSR. Ser. khim.  
no.8s1442-1447 '65. (MIRA 18;9)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

L 2139-66 EWT(m)/EPF(c)/EWP(j)/EWA(c) RM  
ACC NR: AP5026988 SOURCE CODE: UR/0020/65/164/005/1069/1072

AUTHOR: Rudkovskaya, G. D.; Sokolova, T. A.; Koton, M. M. (Corresponding member 48  
AN SSSR) 44,55 44,55 44,55 B

ORG: Institute of Macromolecular Compounds, Academy of Sciences, SSSR (Institut  
vysokomolekulyarnykh soyedineniy Akademii nauk SSSR)

TITLE: The structure of polydimethacrylimides 1, 44,55

SOURCE: AN SSSR. Doklady, v. 164, no. 5, 1965, 1069-1072

TOPIC TAGS: polymer, plastic, acrylic polymer, polyacrylimide, structural analysis,  
infrared spectroscopy

ABSTRACT: From a comparison of infrared spectra with those of model compounds it  
was demonstrated that while deamination of N-alkylated polyacrylamides leads to  
formation of six-membered imide rings in the polymer chain, polymerization of N-al-  
kylated dimethacrylimides yield a polymer whose chain contains five-membered imide  
rings. This suggests head-to-head polymerization of dimethacrylimides. Unsubsti-  
tuted dimethacrylimide, bearing no substituent at the nitrogen atom, constitutes an  
exception to the above. Orig. art. has: 2 tables and 1 figure. [vs]

SUB CODE: MT, GC/ SUBM DATE: 19Apr65/ ORIG REF: 003/ OTH REF: 006/  
ATD PRESS: 4123

Card 1/1

UDC: 541.6

L 13294-66 EWT(m)/EWP(j)/EWA(c) RM  
ACC NR: AP6000329 (A) SOURCE CODE: UR/0286/65/000/021/0017/0017

INVENTOR: Sokolova, T. A.; Rudkovskaya, G. D.

31  
B

ORG: none

9,44,51

15

TITLE: A method for producing dimethacrylamides. Class 12, No. 175953 [announced by the Institute of High Molecular Compounds AN SSSR (Institut vysokomolekulyarnykh soyedineniy AN SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 17

TOPIC TAGS: methacrylate plastic, polymer

ABSTRACT: This Author's Certificate introduces a method for producing dimethacrylamides from monomethacrylamides. The product yield is increased and a wider selection of raw materials is provided by treating the monomethacrylamides in methacrylic chloride in the presence of magnesium bromoethyl in a tetrahydrofuran medium at 50° C.

SUB CODE: 07/ SUBM DATE: 12Jun63/ ORIG REF: 000/ OTH REF: 000

jw  
Card 1/1

UDC: 547.391.3'398.1.07

SOKOLOVA, T. A.

Sokolova, T. A.

"Changes in urine secretion, the plethysmogram, and skin temperature  
in connection with the initial phase of the digestive process."  
Leningrad Order of Lenin State U imeni A. A. Zhdanov. Leningrad,  
1956 (Dissertation for the degree of Candidate in Biological Science)

Knizhnaya letopis'  
No. 25, 1956. Moscow

SOKOLOVA, T.A.; SPASSKAYA, A.S.

Variations in the secretion of urine related to the initial stage  
of digestion. Trudy Kirov. otd. Vses. fiziol. ob-va 1 no.1:60-69  
'60. (MIRA 14:8)

1. Fiziologicheskaya laboratoriya Kirovskogo gosudarstvennogo  
pedagogicheskogo instituta imeni V.I.Lenina.  
(URINE—SECRETION) (DIGESTION)

SOKOLOVA, T.A.

Variations of skin temperature at the beginning of digestion.  
Trudy Kirov. otd. Vses. fiziol. ob-va 1 no.1:70-82 '60. (MIRA 14:8)

1. Fiziologicheskaya laboratoriya Kirovskogo gosudarstvennogo  
pedagogicheskogo instituta imeni V.I.Lenina.  
(DIGESTION) (BODY TEMPERATURE)

SOKOLOVA, T.A.

Homemade apparatus for the course of human anatomy, physiology  
and hygiene. Biol. v shkole no.6:42-47 K-D '61.  
(MIRA 14:11)

1. Kirovskiy pedagogicheskiy institut.  
(Physiological apparatus)

NEWTON, N.Ya.; SOKOLOV, T.A.

Experiments with poisonou~~s~~ plants in rodent control. Trudy  
Ural. otd. NCPW no. 2. 54-60 '59.  
(Poisonous plants)  
(Rodent baits and repellents)

GRIGOR'YANTS, N.N.; SOKOLOVA, T.A.; YADODINSKAYA, S.G.

Ascorbic acid content of vegetables and grapes in the Turkmen  
S.S.R. Izv. AN Turk. SSR no.5:77-80 '59.  
(MIRA 13:3)

1. Ashkhabadskiy institut epidemiologii i gigiyeny Ministerstva  
zdravookhraneniya Turkmeneskoy SSR.  
(Ascorbic acid)  
(Turkmenistan--Vegetables)  
(Turkmenistan--Grapes)

GRIGOR'YANTS, N.N.; SOKOLOVA, T.A.; YAGODINSKAYA, S.G.

Characteristics of the mineral composition of vegetable food products  
in the Turkmen S.S.R. Izv. AN Turk. SSR. Ser. biol. nauk no.1:49-53  
'61. (MIRA 14:8)

1. Turkmen'skiy gosudarstvennyy meditsinskiy institut.  
(TURKMENISTAN—PLANTS, EDIBLE CHEMICAL ANALYSIS)  
(MINERALS IN FOOD)

MINORANSKIY, V.A., aspirant; SOKOLOVA, T.A.; GAMPER, N.M., kand.sel'skokhoz. nauk; LESNIKOVSKAYA, A.Ya.; VLADIMIRSKAYA, N.S.; TELEYMANOV, N.K.; STADNITSKIY, G.V., nauchnyy sotrudnik; NAUMOV, F.V., nauchnyy sotrudnik

Practices in the use of new preparations. Zashch. rast. ot vred.  
i bol. 8 no.8:30-31 Ag '63. (MIRA 16:10)

1. Rostovskiy gosudarstvennyy universitet (for Minoranskiy).
2. Voronezhskaya stantsiya Vsesoyuznogo instituta zashchity rasteniy (for Sokolova).
3. Vsesoyuznyy institut zashchity rasteniy (for Gamper, Lesnikovskaya, Vladimirskaia).
4. Zaveduyushchiy entomologicheskim punktom Tetyushskogo rayona, Tatarskoy ASSR (for Teleymanov).
5. Nauchno-issledovatel'skiy institut lesnogo khozyaystva, Leningrad (for Stadnitskiy, Naumov).

SOKOLOVA, T.A.

Effect of rocks on the formation of Podzol. Pochvovedenie  
no.3:14-23 Mr '64. (MIRA 17:4)

1. Pochvennyy institut imeni Dokuchayeva AN SSSR

KARAVAYEVA, N.A.; SOKOLOV, I.A.; SOKOLOVA, T.A.; TARGUL'YAN, V.O.

Characteristics of soil formation in tundra-taiga permafrost  
regions in Eastern Siberia and the Far East. Pochvovedenie no. 7:  
26-37 Jl '65 (MIRA 19:1)

1. Pochvennyy institut imeni V.V. Dokuchayeva, Moskva, i Institut  
geografii AN SSSR. Submitted March 10, 1965.

SOKOLOVA, T.A.; SMIRNOVA, G.Ya.

Development of the Podzol formation on granite. Pochvovedenie  
no.6:41-49 Ja '65. (MIRA 18:11)

I. Pochvennyy institut imeni Dokuchayeva. Submitted Dec. 27,  
1963.

SLVRO, "Ogrodnoye, 1964.

The growth of plankton algae during self-purification of sewage  
in sewage lagoons. Mikrobiologiya 33 no.4:699-704 Jl-Ag '64.

(MIRA 18:3)

1. Belorusskiy nauchno-issledovatel'skiy sanitarno-gigiyenicheskiy  
institut, Minsk.

BUSEV, A.I.; TIPTSOVA, V.G.; SOKOLOVA, T.A.

Reaction of reduced forms of tungsten with complexon III.  
Zhur.neorg.khim. 10 no.8:1857-1861 Ag '65.  
(MIRA 19:1)

I. Submitted July 16, 1964.

Review of "Instructions for Seismic Prospecting," OKNOVA, T. E.

1-7/2000 33

"Review of 'Instructions for Seismic Prospecting,'" (I. Berdon and A. Ye. Isen'yeva, reviewers)

In Akad. Nauk SSSR, Ser. Geofiz., No. 3, pp. 271-274.

Review the symposium "Instruktsiya po geofizicheskoy seismorazvedke," a compilation of works coordinated by A. S. Kurnan, V. M. Litrefenov, M. A. Molotovskaya, T. B. Solodova, K. S. Andreyev in participation with I. L. Gurvich, M. G. Obreht, and G. N. Shchelidov, and edited by I. Z. Kupolov-Yurepolk. Published by the State Geology Press, Moscow, 1952, 94 pp., 5,000 copies, price 2.90 rubles.

258T90

TSEYTLIN, P.I.; UGAROVA, T.Yu.; KLIMOV, V.Yu.; SOKOLOVA, T.D.

Differences in the radiosensitivity of desoxyribonucleoproteins  
and DNA. Biokhimia 25 no.1:129-134 Ja-F '60. (MIRA 13:6)

1. Institute of Experimental Biology, Academy of Medical Sciences  
of the U.S.S.R., Moscow.  
(RADIATION EFFECTS)  
(NUCLEOPROTEINS)  
(DESOXYRIBONUCLEIC ACID)

S/080/60/033/008/005/013  
A003/A001

AUTHORS: Nisel'son, L.A., Sokolova, T.D.

TITLE: An Investigation of the Kinetics of Interaction Between the Higher Oxides of Tantalum, Niobium, Titanium and Zirconium and Phosphorus Pentachloride ✓ ✓ ✓ ✓

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol.33, No. 8, pp. 1755-1765

TEXT: The kinetics of chlorination of higher oxides of tantalum, niobium, titanium and zirconium with liquid phosphorus pentachloride was studied. The investigation was based on the assumptions 1) that chlorination in the condensated phase causes only a slight change in the concentration of the chlorinating agent; 2) that the experimental arrangement of the investigation is easy; 3) that chlorination products are obtained which can be used for the separation and purification of zirconium, tantalum and niobium by the rectification method. The results obtained in the experiments, presented in the form of a relation between the logarithm of oxide chlorination rate and the inverse absolute temperature of chlorination, obey in all cases the linear law. This proves that in the temperature interval studied (150-300°C) the chlorination processes take place in the kinetic region, i.e., the rate of the process is determined by the rate of the

Card 1/2

S/080/60/033/008/005/013  
A003/A001

An Investigation of the Kinetics of Interaction Between the Higher Oxides of  
Tantalum, Niobium, Titanium and Zirconium and Phosphorus Pentachloride

chemical interaction. Based on the tangents of the inclination angles of the curves obtained the activation energies of the process were calculated. The values obtained vary within the narrow limits of 25-33 kcal/mole and change little at the transition from one oxide to the other. For zirconium dioxide the activation energy is 11.0 kcal/mole, but the reproducibility of the results is low. The chlorination rate of oxides in relation to the weight unit (in g/g·min) depends mainly on the temperature of their preliminary calcination. The principal cause of the change in the oxide chlorination rate in this case is the change of their specific surface. The character of the modification of the oxides studied has only a slight effect on the chlorination rate. The chlorination rate of  $\gamma$ -Nb<sub>2</sub>O<sub>5</sub> (calcinated at 800°C) differs from that of  $\alpha$ -Nb<sub>2</sub>O<sub>5</sub> by only 1.3 times, whereas for the same monoclinic modification of zirconium dioxide, but calcinated at 600 and 800°C the chlorination rates differ by a factor of 5.6. There are 6 figures, 1 table and 18 references: 12 Soviet, 2 American, 2 French, 1 English and 1 German.

SUBMITTED: December 21, 1959

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SOKOLOVA, T. D., TSEYTLIN, P. I., SPITKOVSKI, D. M., USAKOVSKAYA, T. S.,  
GOLUBEVA, G. P., RYABCHENKO, N. I. (USSR).

Structural Lability of Deoxyribonucleic Acids and Deoxyribonucleoproteins as a  
function of their Molecular Morphology.

report presented at the 5th Int'l.  
Biochemistry Congress, Moscow, 10-16 Aug. 1961

NISEL'SON, L.A.; SOKOLOVA, T.D.

Liquid-vapor phase equilibrium in systems formed by  $TiCl_4$ ,  
 $VOCl_3$ , and  $POCl_3$ . Zhur. neorg. khim. 6 no.7:1645-1651 JI  
'61. (MIRA 14:7)  
(Systems (Chemistry))

S/078/62/007/012/002/022  
B144/B180

AUTHORS: Nisel'son, L. A., Sokolova, T. D.

TITLE: Orthobaric densities and critical parameters of zirconium (IV) and hafnium (IV) halides

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 12, 1962, 2653-2660

TEXT: From the orthobaric densities determined in high-purity Zr and Hf tetaiodides, tetrabromides and tetrachlorides, the critical values of these compounds were calculated. The vapor and liquid densities were determined in a range from about 360 to 690°C in a transparent oven containing a nitrite-nitrate bath for temperatures below 500°C or a nickel block for higher temperatures. The sample enclosed in a sealed ampoule or a pycnometer was placed in the bath or block. The values found for  $ZrCl_4$  and  $HfCl_4$  were somewhat higher and had a flatter maximum than those published earlier (Zh. neorgan. khimii, 6, 1242 (1961)). The critical temperature was derived from the maximum of the orthobaric density. The critical density was found according to the Cailletet-Mathias law; for Card 1/2

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Orthobaric densities and critical ...

the iodides and chlorides it deviated slightly from this law. The critical pressure was calculated from the critical constant,  $c_{cr} = R \cdot T_{cr} / (P_{cr} \cdot V_{cr} \cdot M)$ ; the figure taken for  $c_{cr}$  was 3.65. The critical volume and b the constant of the Van der Waals equation were similar for corresponding Zr and Hf halides. Owing to the small temperature range of their liquid state, the chlorides cannot be separated by rectification, but the iodides can. There are 6 figures and 4 tables.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti (State Scientific Research and Planning Institute of the Rare-metal Industry) (Moscow)

SUBMITTED: March 28, 1962

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S/078/63/008/004/003/013  
A059/A126

AUTHORS: Pugachevich, P.P., Nisel'son, L.A., Sokolova, T.D., Anurov, N.S.

TITLE: Density, viscosity, and surface tension of carbon tetrachloride and tin tetrachloride

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 8, no. 4, 1963, 791 - 796

TEXT: The density of  $\text{CCl}_4$  and  $\text{SnCl}_4$  was measured in a sealed quartz pycnometer (Fig. 1) with a volume of about  $20 \text{ cm}^3$  and a capillary diameter of about 2 mm. The volume expansion of quartz was taken as  $1.5 \cdot 10^{-6}$  in the calculations. The correction for the vapors in the free volume of the capillary was calculated from the ideal-gas equation where the saturated-vapor pressure was determined from the equations:

$$\text{CCl}_4 \dots \log p = \frac{-2400}{T} - 5.3 \log T + 23.6 , \quad (1)$$

and

$$\text{SnCl}_4 \dots \log p = \frac{-1925}{T} + 7.865 . \quad (2)$$

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S/078/63/008/004/003/013  
A059/A126

Density, viscosity, and surface tension of ....

The relative error can be about  $5 \cdot 10^{-2}\%$ . The viscosity was measured with the somewhat modified Martin viscometer made of molybdenum glass. The capillary diameter was selected between 0.3 and 0.5 mm, and the length of tube 4 was 180 mm. The viscosity was calculated from the equation:

$$\eta = c (\rho_1 - \rho_v) \tau , \quad (3)$$

where  $c$  is the constant of the apparatus,  $\rho_1$  and  $\rho_v$  is the density of the liquid and the vapor, respectively, at a given temperature, and  $\tau$  is the time of flow. The relative error of the viscosity determination is not in excess of 0.2%. The surface tension was measured with the setup shown in Figure 3, and calculated from the equation:

$$\sigma = \frac{1}{2} g (\rho_1 - \rho_v) r h_1 \left[ 1 - \frac{2}{3} \frac{r}{h_1} - \frac{1}{3} \frac{r^2}{h_1^2} \right] , \quad (4)$$

where  $g$  is acceleration due to gravity,  $r$  the inner radius of tube 6 at the top (in this case,  $r = 0.010$  cm). The relative error in no case exceeded 0.2%. Equations relating density, viscosity, and surface tension of  $\text{CCl}_4$  and  $\text{SnCl}_4$  to temperature found by the least-square methods were:  $\rho = 1.6287 - 0.001763 t -$

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A059/A126

Density, viscosity, and surface tension of ....

- 0.00000209  $t^2$  (for  $CCl_4$ ) and  $\rho = 2.2789 - 0.0025437 t - 0.00000081 t^2$  (for  $SnCl_4$ );  $\eta = 1.3458 - 0.022493 t + 0.0002222 t^2 - 0.000000946 t^3$  (for  $CCl_4$ ) and  $\eta = 1.0917 - 0.01241 t + 0.00007712 t^2 - 0.000000193 t^3$  (for  $SnCl_4$ ); and  $\sigma = 29.21 - 0.1259 t$  (for  $CCl_4$ ) and  $\sigma = 29.92 - 0.1134 t$  (for  $SnCl_4$ ). There are 5 figures and 6 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR (Institute of General and Inorganic Chemistry of the Academy of Sciences, USSR), Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoy promyshlennosti (State Design and Planning Scientific Research Institute of the Rare Metal Industry)

SUBMITTED: August 24, 1962

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